

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014863**Date Inspected:** 29-May-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspectors: Mr. Li Yang, Mr. Liu Hua Jie, Mr. Tian Lei, Mr. Liu Fa Wen

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 2

This QA Inspector observed ZPMC welder Mr. Jiang Yong Sheng, stencil 045240 is using flux cored welding procedure WPS-B-T-2132-3 to make floor beam weld FB3209-001-055. This QA Inspector observed ZPMC QC Inspector Mr. Zhu Lin has recorded a welding current of 300 amps and 30.2 volts and Mr. Jiang Yong Sheng appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yan Shitian, stencil 062708 is using flux cored welding procedure WPS-B-T-2132-3 to make floor beam weld FB3202-001-015. This QA Inspector observed ZPMC QC Inspector Mr. Zhu Lin has recorded a welding current of 305 amps and 30.6 volts. This QA Inspector measured a welding current of approximately 290 amps and Mr. Yan Shitian appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

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OBG Bay 3

This QA Inspector observed ZPMC welder Mr. Tu Zhi Wu, stencil 214945 is using flux cored welding procedure WPS-B-T-2132-3 to make OBG floor beam weld FB3131-001-013. This QA Inspector observed a welding current of approximately 300 amps and 30.25 volts. This QA Inspector observed Mr. Tu Zhi Wu appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 5

This QA Inspector observed ZPMC workers have recently been performing heat straightening the top and bottom flanges of traveler rail 20TR2-009 as listed on heat straightening document HSR1(B)-8350. ZPMC appears to have manufactured several brackets where mechanical jacks are being used to apply pressure to allow the top and bottom flanges to become parallel with each other. This activity is being monitored by ZPMC QC Inspector Mr. Shen Jian Guo who has a laser heat measurement device to monitor the temperature of the base material as it is being heat straightened. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

OBG Bay 7

This QA Inspector observed ZPMC welder Ms. Zhang Feng, stencil 069769 is using flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair to make repair welds on traveler rail 22TR3-004. ZPMC QC Inspector Mr. Liu Fa Wen informed this QA Inspector that the reason for these repairs is due to visual rejections. This QA Inspector observed the base material was preheated with a torch prior to commencement of welding and this QA Inspector measured a welding current of approximately 170 amps. Mr. Zhang Feng appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

Segment Trial Assembly

ABF issued "Inspection Notification Sheet" number 05292010-2 item #2 informing QA that on 05-29-2010 at 19:30 hours ABF Inspectors will be performing ultrasonic (UT) inspections of repaired hold back weld CA058-006 which joins OBG segment 9AW deck plate to the edge plate on the bikepath side of the OBG. This weld is located in the trial assembly area. ABF/Sense UT Inspectors appear to have accepted this weld repair. This QA Inspector performed random visual and ultrasonic inspections utilizing scanning patterns A, B, C and D (AWS D1.5 Fig 6.7) and the weld repairs appear to comply with project specifications. Items observed on this date appeared to generally comply with applicable contract documents. Note: These inspections are being documented and tracked on "Verification Witness Request" documents. See the TL-6027 UT report for additional information concerning this inspection.

This QA Inspector observed ZPMC welder Mr. Li Gui Min, stencil 220069 is using flux cored welding procedure WPS-B-T-2231-TC-U4c-F to make OBG bikepath cantilever beam weld BK001-036-009. This QA Inspector observed that Mr. Li Gui Min appears to be certified to make this weld. This QA Inspector observed a welding current of approximately 300 amps and 31.8 volts. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC CWI Mr. Liu Hua Jie has recorded that welder Mr. Ji Yi, stencil 045268 is using shielded metal arc procedure WPS-345-FCAW-3G(3F)-Repair-1 make weld repairs to the bottom plate weld between OBG segments 8AW and 8BW. This repair of ultrasonic rejections is documented on weld repair document WR12926. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC CWI Mr. Liu Hua Jie has recorded that welder Mr. Tian Zhaoquan, stencil 045246 is using shielded metal arc procedure WPS-345-FCAW-3G(4F)-Repair-1 make critical weld repairs to corner assembly weld CA049-002. This repair of ultrasonic rejections is documented on weld repair document CWR1565. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Bi Laishu, stencil 045280 is using flux cored welding procedure specification WPS-345-FCAW-2G(2F)-Repair of traveler rail bracket weld TR2A(PP52). ZPMC QC Inspector Mr. Wang Jie informed this QA Inspector that the reason for this repair is to correct misalignment of the traveler rail bracket flanges. Mr. Wang Jie has recorded a welding current of 295 amps and 29 volts and this QA Inspector measured a welding current of approximately 290 amps. This QA Inspector observed the base material appears to have been being preheated by a torch prior to welding. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.



Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
